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(71) Applicant *(for all designated States except US)*: **POLIMERI EUROPA S.p.A.** [IT/IT]; Via E. Fermi 4, I-72100 Brindisi (IT).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **CONTI, Giuseppe** [IT/IT]; Via Modica 14/2, I-20143 Milano (IT). **ADESSO, Corrado** [IT/IT]; Via Tertulliano 50, I-72100 Brindisi (IT). **MENCONI, Francesco** [IT/IT]; Via Kennedy 36, I-20097 San Dontato Milanese-Milan (IT). **MASI, Francesco** [IT/IT]; Via Galvani 7, I-26866 Sant'Angelo Lodigiano-Lodi (IT).

(74) Agents: **DE GREGORI, Antonella** et al.; Ing. Barzano' & Zanardo Milano S.p.A., Via Borgonuovo 10, I-20121 Milan (IT).

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(54) Title: IMPROVED SOLID CATALYST COMPONENT AND PROCESS FOR THE (CO) POLYMERIZATION OF ETHYLENE

(57) Abstract: Catalyst and solid component of catalyst for the (co)polymerization of ethylene, comprising titanium, magnesium, chlorine, a protic organo-oxygenated compound D_p and a neutral aprotic electron-donor compound D, in the following molar ranges: Mg/Ti= 1.0-50; D/Ti= 1.0-15; Cl/Ti= 6.0-100; D_p/D= 0.05-3; and a process for obtaining said component comprising the following steps in succession: (a) formation of a mixture and dissolution, in said electron-donor aprotic compound D, of a magnesium chloride and a titanium compound having formula (II): $Ti^v(OR_3)_aX_{(v-a)}$ wherein each R_3 independently represents a hydrocarbyl or acyl radical having from 1 to 15 carbon atoms; each X is selected from chlorine, bromine or iodine; "v" has the value of 3 or 4, and "a" is a number varying from 0 to "v", with a molar ratio between titanium and magnesium ranging from 1/1 to 50/1; (b) partial separation of the compound D from said mixture prepared in step (a) until a residue is obtained, solid at room temperature, wherein the D/Ti ratio ranges from 1.5 to 40, (c) formation of a suspension of said solid organo-oxygenated protic compound D_P, in such a quantity that the molar ratio D_P/D ranges from 0.1 to 1.2 and maintaining the mixture until equilibrium is reached, to form the desired solid component of catalyst.